

Attorney Docket # 1781-73RE

Patent

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Heikki Ilvespää

Serial No.: 08/861,231

Filed: May 21, 1997

For: Method and Apparatus for Reduction of Curling
of Paper in the Drying Section of a Paper
Machine

Examiner: Pamela Wilson
Group Art: 3404

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Assistant Commissioner for Patents
Washington, DC 20231

INFORMATION DISCLOSURE STATEMENT
PURSUANT TO 37 C.F.R. § 1.97(c)

S I R:

In compliance with the duty of disclosure under 37 C.F.R. § 1.56 and in accordance with the practice under 37 C.F.R. §§ 1.97(c) and 1.98, the Examiner's attention is directed to the documents listed on the enclosed Form PTO 1449. Copies of the listed documents are also enclosed.

This information is being submitted three months after the mailing date of the first Office Action on the merits, but before the mailing date of either a final Action Under § 1.113 or a Notice of Allowance under § 1.311 whichever occurs first.

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Accordingly, a check in the amount of \$240 is enclosed to cover the fee under 37

C.F.R. § 1.17(p).

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It is respectfully requested that the above information be considered by the Examiner and that a copy of the enclosed Form PTO-1449 be returned indicating that such information has been considered.

Although not required, a concise explanation of each of the documents is nevertheless provided below.

Documents AG and AH disclose how drying stresses in paper induce the paper to curl.

Documents AI through AO disclose application of moisture in the calendaring section of a papermaking machine for improving surface properties of paper.

Document AS schematically illustrates a prior art papermaking machine having a plurality of double-felted double-tier dryer sections. It was well known at the time of filing of the original application that this type of dryer section controls curl by alternately drying the top and bottom sides of a paper web as the paper web travels through the dryer sections. However, it was also known that the paper web is unsupported as it passes through the open draws between the top and bottom dryer cylinders of a double-felted double-tier dryer section. This unsupported run, known as an open draw, causes paper breaks and may limit the operating speed of a papermaking machine.

Document AT schematically depicts another prior art papermaking machine having a plurality of double felted double tier dryer sections.

Document AU schematically shows a prior art papermaking machine also having a plurality of double-felted double-tier dryer sections.

Document AV schematically illustrates a prior art papermaking machine having a plurality of double-felted double-tier dryer sections, and a first and a second coater disposed downstream of the dryer sections for coating one side of the dried paper web. This machine also includes a moisturizer disposed downstream of the first and second coaters for applying moisture to the other side of the coated paper web for controlling the tendency of the coated paper web to curl. However, this machine does not asymmetrically dry a paper web by passing it through a plurality of top-felted single-tier dryer sections, as required by amended claim 26.

Documents AW to AZ and BA schematically illustrate prior art papermaking machines having a plurality of top-felted single-tier dryer sections followed by a plurality of double-felted double-tier dryer sections to complete drying and to eliminate curl by drying both sides of the web.

It is respectfully submitted that the aforementioned documents, either singly or in combination, do not render any of the claims pending in the present application unpatentable.

Any additional fees or charges required at this time in connection with the application may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

Respectfully submitted,
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Dated: November 13, 1998